F2 Fibre Optic Contact

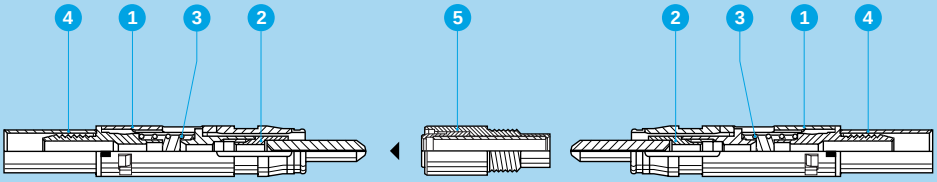
Introduction

The F2 type contact is designed for fitting into single fibre 0K series, multi fibre connectors or mixed fibre optical/electrical connectors from 2B to 5B, 2K to 5K series.
Its main features are as follows:
– Assembly uses pre-domed ceramic ferrules
– Simple and fast polishing ensuring the physical contact of the fibre end face
– After mounting on the cable, the contact is very easily installed in the main connector insulator, the particular shape of the contact body retains it in the insulator
– Unique cable assembly independent of the connector shell
– The alignment tube can be easily removed in order to clean the fibre end face.
This contact makes it possible to use single fibre cables with single-mode or multi-mode fibres of the following sizes; 9/125, 50/125, 62.5/125, 100/125 and 100/140 µm.

Part Section Showing Internal Components

Female contact

1. body with holder
2. ferrule with holder
3. spring
4. crimp ferrule
5. alignment tube with support



Male contact

1. body with holder
2. ferrule with holder
3. spring
4. crimp ferrule

Technical Characteristics

Material and Treatment

Component	Material	Surface treatment (µm)	
		Cu	Ni
Body	PEEK	without treatment	
Ferrule	Ceramic	without treatment	
Holder	Alloy CuNiZn	without treatment	
Crimp holder	Brass	0.5	3
Spring	Stainless steel	without treatment	
Crimp ferrule	Cu 99	0.5	3
Support	Alloy CuNiZn	without treatment	
Alignment tube	Ceramic	without treatment	

Mechanical and Environmental

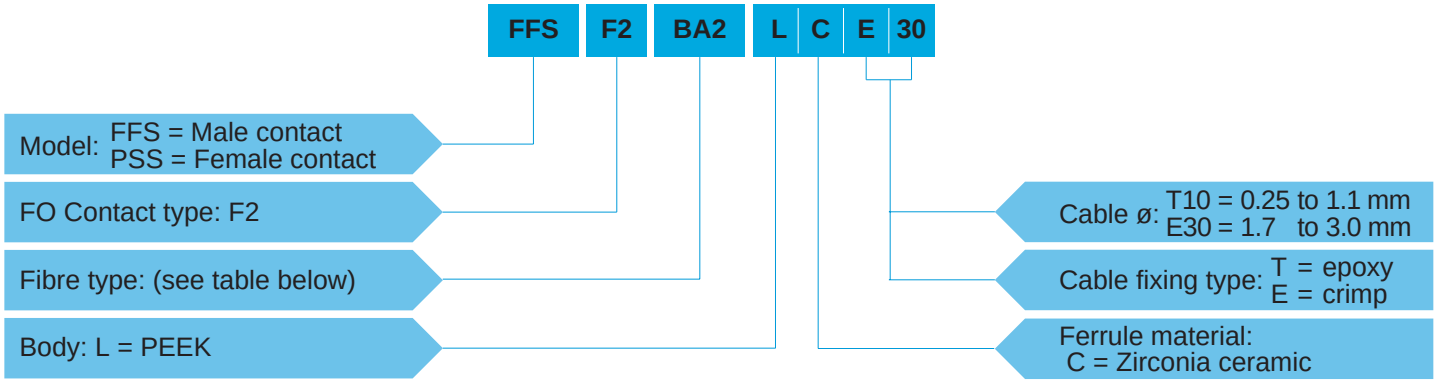
Characteristic	Value	Standard
Mating durability	10,000 cycles	IEC 61300-02-02
Damp heat steady state	up to 95 % at 60°C	IEC 61300-02-19
High temperature	+80°C	IEC 61300-02-18
Low temperature	-40°C	IEC 61300-02-17
Cable retention	100 N	IEC 61300-02-04
Impact (Method A)	1 m onto concrete floor	IEC 61300-02-12
Shock (3 cycles in 2 directions)	100 g, 10-50 ms; 20 g 6-9 ms	IEC 61300-02-09
Vibration (7 cycles)	Diagram 2 page 111	IEC 61300-02-01

Optical

Characteristic	Value	Standard	Method
Average insertion loss fibre 9/125 µm	0.10 dB	IEC 61300-03-04	Insertion Method B
Average insertion loss fibre 50/125 µm	0.25 dB	IEC 61300-03-04	Insertion Method B
Return loss fibre 9/125 µm (UPC)	≥45 dB	IEC 61300-03-06	Branching Device Met.
Return loss fibre 9/125 µm (Hand polish)	~30 dB	IEC 61300-03-06	Branching Device Met.

Note: Detailed characteristics are presented on pages 109 to 111.

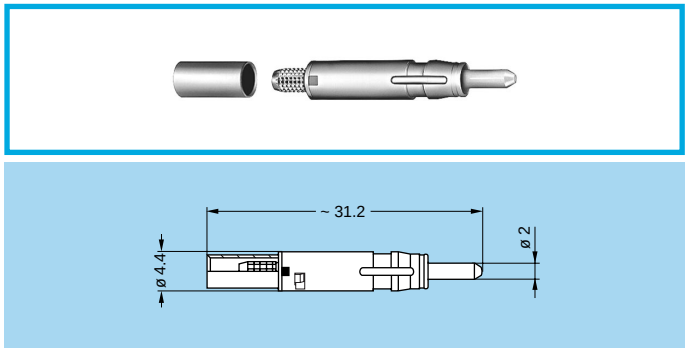
Part Number Example



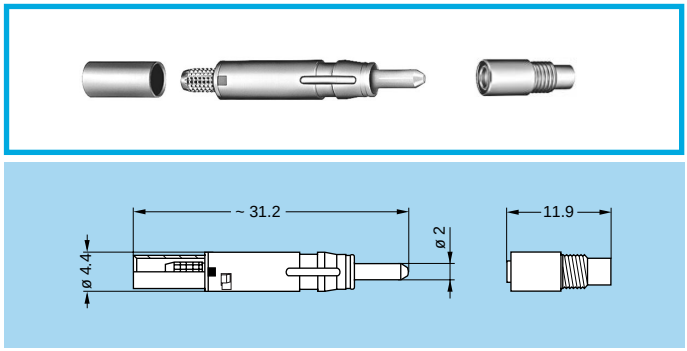
FFS.F2.BA2.LCE30 = Male F2 type fibre optic contact, ferrule bore diameter of 125 µm, PEEK body, Zirconia ceramic ferrule, crimp cable fixing, for tight jacket cable with a diameter between 1.7 to 3.0 mm.

Model - FO Contact Type

FFS.F2 Male F2 Fibre Optic Contact



PSS.F2 Female F2 Fibre Optic Contact



Fibre Type

The choice of the ferrule hole diameter is dependent upon the fibre cladding size. LEMO offers a range of ferrule hole diameters to suit the users' specific requirements.

Reference	ø Core/Cladding (µm)	Ferrule hole diameter (µm)	Note [1]
BA2	9/125 50/125 62.5/125 100/125	125	●
BB2		126	●
BC2		127	○
BD2		128	○
FA2	100/140	140	○
FB2		144	●

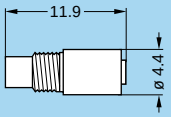
● First choice alternative ○ Special order alternative

Note: [1] The BA2 type (ferrule hole 125 µm) is recommended for single-mode fibres. The BB2 type (ferrule hole 126 µm) is commonly used with multi-mode fibres.

Cable Fixing Type

Reference		Cable Structure	Cable ø
Cable fixing	Reference ø		
T	10	Buffer coated fibre	0.25 to 1.1
E	30	Tight jacket cable	1.7 to 3.0

Accessory



PSS Alignment device for F2 fibre optic contact

Part number
PSS.F2.290.NZZ

Note: Alignment device should be ordered as replacement item.